

University of Minnesota Duluth

Summer 2012 Course Syllabus

Educ 5570 Section 242

Exemplary Models in Science Education: 15th Annual Minnesota Minerals Education Workshop- Conference on the Geology and Earth Resources of Southeastern Minnesota

Professional Development for K-12 Educators and Other Professionals

Instructor of Record: James D. Miller, Jr.

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Dates: June 19-21, 2012
Location: Winona State University

2012 Course:

Educ 5570 Section 242 Exemplary Models in Science Education: 15th Annual Minnesota Minerals Education Workshop - Conference on the Geology and Earth Resources of Southeastern Minnesota for two UMD collegiate graduate or undergraduate credits at \$101.00 per credit (includes UMD basic computer network access).

Agenda: The agenda will be distributed to participants at the workshop.

Required Readings and Resources: Readings and classroom resources will be provided to participants at the workshop.

URLs: <http://www.mmew.org>

Learning Outcomes

Upon completion of the workshop, participants will be able to:

- Identify ways to integrate hands-on classroom exercises and field experiences, which emphasize Minnesota geology and mineral resources, into earth science curriculum at all levels of K-12 education.
- Understand ways that mineral, energy, and water resources are used in our daily lives.
- Develop strategies for using local geological sites of southeastern Minnesota to explain and illustrate general geologic concepts and processes.
- Identify Minnesota minerals and rocks and understand the story that rocks tell
- Become familiar with the life-cycle of mining from exploration to reclamation
- Become familiar with ways that resource extraction can be accomplished with minimal impact to the environment
- Make contacts with professionals who can provide outreach assistance to educators.

Presenters: regional geologists, educators, and minerals and mining industry professionals.

Required Components for UMD Collegiate Graduate Credit: Credit participants are expected to attend all sessions, complete all onsite class assignments, and submit a 4-6 page, 1.5-spaced, 12-point font, age-specific lesson plan spanning two weeks of instruction (10 hours) that emphasizes some aspect of Minnesota's geology or resources and is submitted by the due date.

Required Components for UMD Undergraduate Credit: Credit participants are expected to attend all sessions, complete all onsite class assignments, and submit a 3-4 page, 1.5-spaced, 12-point font, age-specific lesson plan spanning one week of instruction (5 hours) that emphasizes some aspect of Minnesota's geology or resources and is submitted by the due date.

Deadline for completion of credit components: Summer 2012 assignments are due on September 7, 2012. Grades will be submitted per UMD guidelines.

To obtain your UMD grade/UMD transcript:

To request a transcript with your grade, logon to:

<http://www.d.umn.edu/registrar/transcripts.html> and select the PDF version or the online version (requires major credit card payment). UMD official transcripts cost \$5.00 per copy.

For additional assistance, please e-mail CE Help: cehelp@d.umn.edu or call 218/726-8113.

If you require special accommodations, please contact the instructor.

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